

Date: Tuesday, 17/02/2009 10:18:35 AM  
 User: Julie Dawson

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : BRACKET  
 Job Number : 45818  
 Estimate Number : 11181  
 P.O. Number :  
 This Issue : 17/02/2009 S.O. No. :  
 Prsht Rev. : NC Part Number : D32941  
 First Issue : / / Type : SMALL / MED FAB Drawing Number : D3294 REVB  
 Previous Run : 44135 Project Number : N/A  
 Material : B  
 Due Date : 10/03/2009 Qty: 12 Um: Each  
 Written By :  
 Checked & Approved By : JUL 09.02.17  
 Comment : Est A 04.08.24 New issue KJ/JLM  
 Est Rev:B Now On Waterjet 07-03-26 JLM  
 Est Rev:C 08-07-16 Redesign part DD verified by:EC  
 Est Rev:D 08-10-06 revB as per dwg DD verified by:EC

## Additional Product

Scrap per  
 ECN 09.557

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 M2024T3S080 2024-T3 .080 sheet



Comment: Qty.: 2.1072 sf(s)/Unit Total : 25.2869 sf(s)

Material: 2024-T3 (QQ-A-250/4) 0.080" thick

(M2024T3S.080)

Identify for D3294-1

Batch: 110908

ml 09 03 05

12

2.0 WATER JET FLOW WATER JET



Comment: FLOW WATER JET

1-Cut as per Dwg D3294

Dwg Rev: B

Prog Rev: B

\*\*\*\*\*grain direction on a 45 deg as per dwg\*\*\*\*\*

2-Deburr if necessary

ml 09 03 05

12

3.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

ml 09.03.05

12

4.0 QC8 SECOND CHECK



Comment: SECOND CHECK

09/03/06 12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Tuesday, 17/02/2009 10:18:35 AM  
User: Julie Dawson

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BRACKET

Job Number: 45818

Part Number: D32941

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

BRAKE NC

NC BRAKE



Comment: NC BRAKE

1- deburr

2- Form as per Dwg D3294

Ensure angle is correct

DESTROY

M-1 09/04/13

SB 09/04/07

(12X)

(12)

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

8.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Black Sandtex (Ref: 4.3.5.7) as per QSI 005 4.3

START TIME: \_\_\_\_\_

OVEN TEMPERATURE: \_\_\_\_\_

FINISH TIME: \_\_\_\_\_

9.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT CHEMICAL CONVERSION COAT

10.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify with Dart P/N using white fine point permanent ink marker, then Stock

Location: \_\_\_\_\_

11.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



M-1 09-04-13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

DART AEROSPACE LTD		Work Order: 45818
Description: Bracket		Part Number: D3294-1
Inspection Dwg: D3294	Rev: B	Page 1 of 1

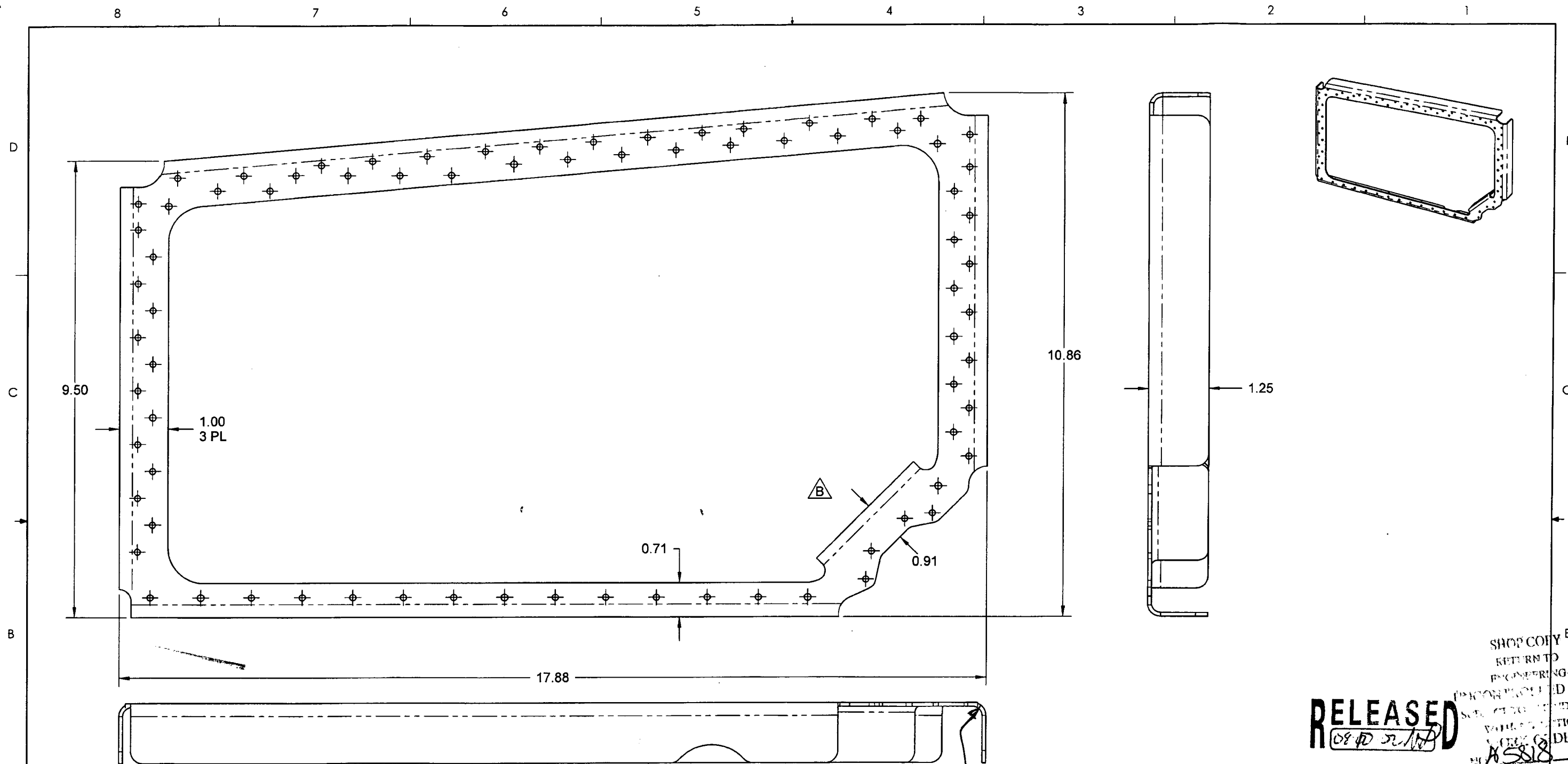
### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
20.02	+/-0.030	20.02	✓		M.T	
1.785	+/-0.010	1.793	✓		vern	
R0.38	+/-0.030	R.0.38	✓		R.G	
R0.25	+/-0.030	R.0.25	✓		R-G	
12.98	+/-0.030	12.98	✓		M.T	
2.072	+/-0.010	2.072	✓		vern	
Ø0.128	+0.005/-0.001	0.128	✓		vern	
Ø0.141	+0.005/-0.001	0.141	✓		vern	
0.080	+/-0.010	0.077	✓		vern	
Grain Direction	N/A					

Measured by: M.M	Audited by: S	Prototype Approval:	N/A
Date: 09/03/05	Date: 09/03/06	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.08.24	New Issue	KJ/JLM	
B	06.03.09	Dimension 12.97 was 13.03	KJ/JLM	
C	08.11.27	Dimensions updated per Dwg Rev B	KJ/EC	



**D3294-1 BRACKET**  
(MADE FROM D3294-1F)

**NOTES:**

- 1) MATERIAL: 2024-T3 (QQ-A-250/4) SHEET 0.080 THICK (REF. DART SPEC M2024T3S.080)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT BLACK SANDTEX (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N D3294-1 USING WHITE FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.79 lbs
- 8) MACHINE PER DRAWING FILE "D3294-B2.DXF"

B	CHANGE FLANGE FROM OUTSIDE TO INSIDE, ZN B4-1, C3-2. CHANGE GRAIN DIRECTION, ZN C4-2	08	08.09.22
A	NEW ISSUE	CP	04.06.28
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.09.22		

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

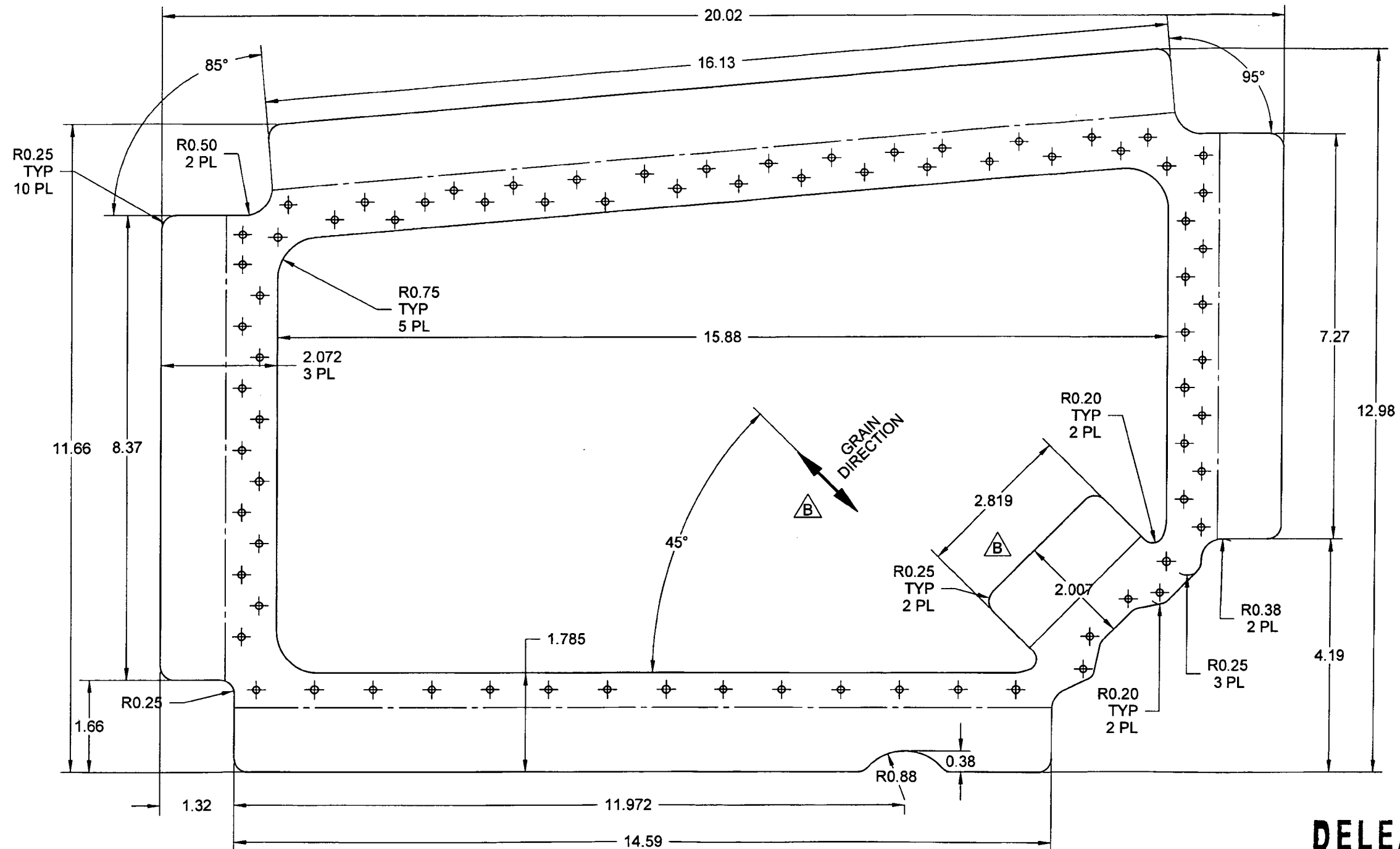
DRAWING NO. **D3294** REV. B  
SHEET 1 OF 3

TITLE **BRACKET** SCALE  
NTS

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08.09.22

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VALUATION NOTICE  
WEEK ORDER  
A5818



**D3294-1F BRACKET FLAT PATTERN**

**RELEASED**  
8-10-52/107

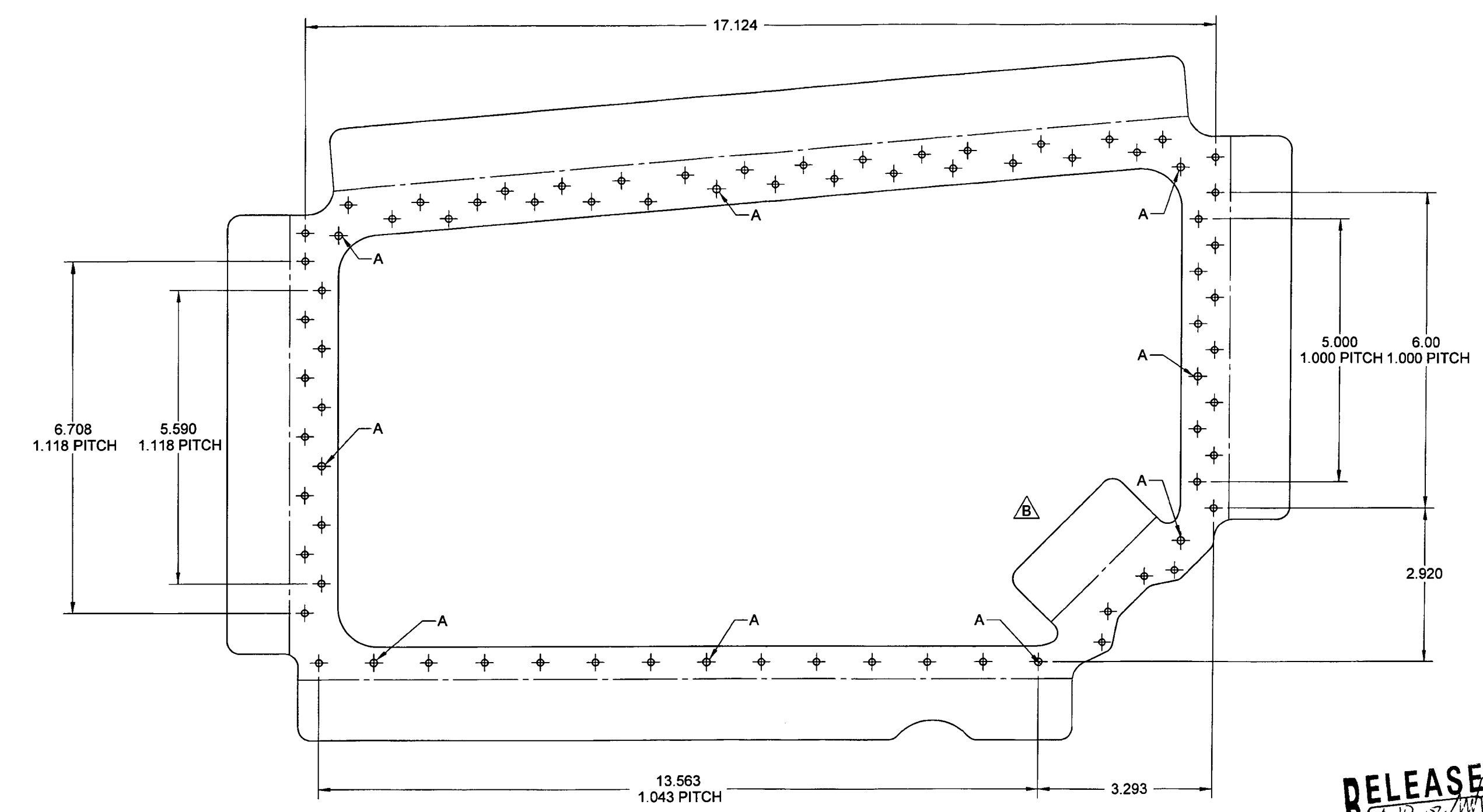
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WORK ORDER NO. 45818

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DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3294	SHEET 2 OF 3
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8 7 6 5 4 3 2 1

D  
C  
B  
A

D  
C  
B  
A



LABEL	HOLE $\phi$
ALL HOLES UNLESS NOTED	0.128
A	0.141

**D3294-1F BRACKET FLAT PATTERN**  
SUPPLEMENTAL

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3294	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		BRACKET	NTS
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WITHOUT NOTICE  
WORK CENTER  
NO. 458/8

**RELEASED**  
08-10-02

8 7 6 5 4 3 2 1



## Under Review Notification

Raised By: DS/HS  
 Date: 09-03-11

Product #: D350-567  
 Product Name: \_\_\_\_\_

Drawing/Kit Number	Drawing/Kit Description	Quantity on Hand (Stock)	Quantity on Order (Production)	Quantity Allocated (Customer Order)	HOLD SHIPMENT	Red Tag/Quarantine Stock	Advise customers	Stop Production	Re-Work Stock	IPP Under Review	Blue File Under Review	ECN #	Instructions
D3294	bracket				y	y	y	y		y	y		Quarantine D350-567-017/-027/-111/-115 in stock

**Description of issue:**

Customer contacted DART indicating that D3294-1 bracket did not fit as it should. Customer also required additional rivet info. D3294-1 will be redesigned Quarantine D350-567-017/-027/-111/-115 in stock until we replace D3294-1.

**Distribution:**

General Manager Production Manager Director Quality Assurance Design Manager Chief Engineer	Production Engineering Coordinators Quality Assurance Coordinator Quality Control Coordinator Order Processing Customer Technical Support	Engineering Project Managers Engineering Clerk Marketing
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**L Lacelle**

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**From:** Marc Bellavance [mbellavance@dartaero.com]  
**Sent:** April 7, 2009 8:05 AM  
**To:** 'L Lacelle'  
**Subject:** RE: D3294-1

Goooooooooooooooooooood Morning Lain-dah,

Sorry for the confusion... I just did not realize that this was the very bracket, the problematic one, that prompted the under review... My bad...

**Marc Bellavance**  
**Mechanical Designer/Technical Support**

***DART aerospace Ltd.***

Tel: 613-632-5200 Ext. 240  
Fax: 613-632-9311  
E-mail: [mbellavance@dartaero.com](mailto:mbellavance@dartaero.com)  
Web: [www.dartaero.com](http://www.dartaero.com)

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**From:** L Lacelle [mailto:llacelle@dartaero.com]  
**Sent:** April 7, 2009 7:32 AM  
**To:** 'Marc Bellavance'  
**Subject:** D3294-1

Goooooooooooooooooooood Morning Marc  
I'm confused....

You signed off a w/o for D3294-1 yesterday for Sylvie, but these are under review (probably one I forgot to take off the shop floor) Are these ok?

Thank You,  
Linda Lacelle  
Production Manager  
Dart Aerospace Ltd

REFERENCE ONLY

07/04/2009

# **ENGINEERING CHANGE NOTICE** **DART AEROSPACE LTD**

Date: 09.04.06	Job No.: P00569	ADR Yes/No: Yes	ADR Date: 09.04.06	ECN #: 09- 557
Product No.: D350-567		Created By: HS	Approved By: <i>[Signature]</i>	
Product Name: Vertical Reference Window		Checked By:	General Manager Approval:	

Distribution	Reqd	Resp	Initial / Date
Production Manager	Y	LL	
Production Engineering Coord	Y	EC	
Production Document Control	Y	JLB	
Customer Technical Support	Y	DS	

Distribution	Reqd	Resp	Initial / Date
DQA / QA Coord	N		
QC Coordinator	N		
Marketing	N		
Customer Order Processing	N		

**Reason for Change:**

Drawing revised because of interference with other parts.

**Documents Affected:**

D3294 Rev. C

**PARTS MUST COMPLY**



**PREVIOUS PARTS SATISFACTORY**



#	Quality Assurance Actions	Reqd	Resp	Notes	Complete
1	Notify Previous Customers	N			
2	Notify Eurocopter France	N			
3					

#	Engineering Actions	Reqd	Resp	Notes	Complete
4	Required Documents/Drawings Under Review	N			
5	Update Product Compatibility Matrix	N			
6	Create Eurocopter Form (FEE)	N			
7	Notify TC / FAA of Change	N			

#	Document Control Actions	Reqd	Resp	Notes	Complete
8	Move Electronic Files	Y	KJ		
9	Update Blue/Pink/DSI Folder and Electronic Files	Y	KJ		
10	Update Controlled PDF Files	Y	KJ		
11	Update Master Document List (MDL)	Y	HS	MDL-D350-567 Rev. C	09.04.07 <i>[Signature]</i>
12	Update Document Record (DR)	Y	KJ	Rev. H	09.04.06 <i>[Signature]</i>
13	Update Product Development Summary	N			09.04.07 <i>[Signature]</i>
14	Update QSI 021 and/or STC Approval List	N			
15	Update Parts / STC Database	Y	KJ		09.04.07 <i>[Signature]</i>
16	Update / Verify ARC Database	N			
17	Create / Update Change Record Form	Y	KJ		09.04.08 <i>[Signature]</i>
18	Create / Update PPP's	Y	KJ		
19	Update Document Control Database / Laminated Dwgs	Y	KJ		
20	Update Grey Project Binder	Y	KJ	Add ADR to D350-567 binder	09.04.07 <i>[Signature]</i>
21	Update D-Part/M-Drawing/DSI/DEO Master Binders	Y	KJ		09.04.07 <i>[Signature]</i>
22					
23					

HS

**Description / Action:**

D3294 revised due to un-anticipated interference with interior window.  
Part redesigned to incorporate DSI 9392

Update estimate for production of D3294-1/-3/-5

D350-567-115 now at CHG 004

All D350-567-115 in stock should be updated to include D3294-1 per D3294 Rev. C

Any D350-567-017/-027/-111 that include D350-567-115 should be updated to include D3294-1 per D3294 Rev. C

CHG 005  
CHG 002  
CHG 002

-027 = *[Signature]*  
-017 = *[Signature]*

11)  $M_{2in} = 4 > 4 \times 45709$   
115  $2 > 2 \times 40464$

ECN Verified & Complete:

Date: